VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Once amended) A method for producing aromatic carbonates which comprises the steps of:

(i) contacting at a temperature sufficient to keep the mixture molten at least one aromatic hydroxy compound with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one Group 8, 9, or 10 metal or a compound thereof;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst; and

(D) optionally, at least one activating solvent;

(ii) optionally heating the mixture at atmospheric pressure to a temperature above that sufficient to keep the mixture molten;

(iii) pressurizing the mixture with carbon monoxide;

(iv) optionally heating the mixture under pressure of carbon monoxide to a temperature above that sufficient to keep the mixture molten;

(v) optionally maintaining the mixture under pressure of carbon monoxide for a time period;

(vi) introducing oxygen to the mixture to a desired concentration of oxygen in carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide;

(viii) optionally maintaining gas flow for a time period at less than a desired ultimate temperature for the mixture; and

(ix) optionally heating the mixture to a desired ultimate temperature under flow of gases.

6. (Once amended) The method of claim [5] 1 wherein the salt is at least one quaternary ammonium salt.

8. (Once amended) The method of claim [4] 1 wherein the salt is at least one alkali metal salt and the mixture contains at least one activating solvent selected from the group consisting of polyethers, nitriles, carboxylic acid amides, and sulfones.

33. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(ii) heating the mixture at atmospheric pressure to a temperature in a range between about 72°C and about 90°C;

(iii) pressurizing the mixture with carbon monoxide;

(v) maintaining the mixture under pressure of carbon monoxide for a time period;

(vi) introducing oxygen to the mixture at a concentration of greater than about 8 molar % based on carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide;

(viii) maintaining gas flow for a time period at less than a desired ultimate temperature for the mixture; and

(ix) heating the mixture to a desired ultimate temperature under flow of gases.

34. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(iii) pressurizing the mixture with carbon monoxide;

(iv) heating the mixture under pressure of carbon monoxide to a desired ultimate temperature;

(v) maintaining the mixture under pressure of carbon monoxide for a time period;

(vi) introducing oxygen to the mixture at a concentration of greater than about 8 molar % based on carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound; and

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide.

35. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(ii) heating the mixture at atmospheric pressure to a temperature no higher than about 72°C;

(iii) pressurizing the mixture with carbon monoxide;

(vi) introducing oxygen to the mixture to a desired concentration of oxygen in carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide; and

(ix) heating the mixture to a desired ultimate temperature under flow of gases.

36. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(ii) heating the mixture at atmospheric pressure to a temperature no higher than about 72°C;

(iii) pressurizing the mixture with carbon monoxide;

(v) maintaining the mixture under pressure of carbon monoxide for a time period;

(vi) introducing oxygen to the mixture at a concentration of greater than about 8 molar % based on carbon monoxide with the proviso that the solvent for the reaction

mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide; and

(ix) heating the mixture to a desired ultimate temperature under flow of gases.

37. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(iii) pressurizing the mixture with carbon monoxide;

(iv) heating the mixture under pressure of carbon monoxide to temperature above that sufficient to keep the mixture molten and below a desired ultimate reaction temperature;

(v) maintaining the mixture under pressure of carbon monoxide for a time period;

(vi) introducing oxygen to the mixture at a concentration of greater than about 8 molar % based on carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide; and

(ix) heating the mixture to a desired ultimate temperature under flow of gases.

38. (Once amended) A method for producing diphenyl carbonate which comprises the steps of :

(i) contacting phenol at a temperature sufficient to keep the mixture molten with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent;

(iii) pressurizing the mixture with carbon monoxide;

(vi) introducing oxygen to the mixture at a concentration of greater than about 8 molar % based on carbon monoxide with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(vii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide; and

(ix) heating the mixture to a desired ultimate temperature under flow of gases.

39. (Once amended) A method for producing aromatic carbonates which comprises the steps of :

(i) contacting at a temperature sufficient to keep the mixture molten at least one aromatic hydroxy compound with a catalyst composition comprising the following and any reaction products thereof:

(A) at least one Group 8, 9, or 10 metal or a compound thereof;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst; and

(D) optionally, at least one activating solvent;

wherein the mixture is exposed to an atmosphere comprising at least about 8 molar % oxygen before the mixture is heated to a temperature above about 90°C, with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound.

42. (Once amended) A method for producing aromatic carbonate from a mixture comprising an aromatic hydroxy compound, which comprises the steps of :

(x) maintaining the mixture at a temperature at least sufficient to keep the mixture molten;

(xi) introducing oxygen and carbon monoxide to the mixture to a desired pressure with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(xii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide;

(xiii) heating the mixture to a temperature in a range between that sufficient to keep the mixture molten and a desired ultimate temperature; and

(xiv) contacting the mixture with one or more mixtures comprising aromatic hydroxy compound and one or more catalyst components comprising the following and any reaction products thereof:

(A) at least one Group 8, 9, or 10 metal or a compound thereof;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst; and

(D) optionally, at least one activating solvent.

47. (Once amended) The method of claim [46] 42 wherein the salt is at least one quaternary ammonium salt.

49. (Once amended) The method of claim [45] 42 wherein the salt is at least one alkali metal salt and the mixture contains at least one activating solvent selected

from the group consisting of polyethers, nitriles, carboxylic acid amides, and sulfones.

56. (Once amended) A method for producing diphenyl carbonate from a mixture comprising phenol, which comprises the steps of :

(x) maintaining the mixture at a temperature at least sufficient to keep the mixture molten;

(xi) introducing oxygen and carbon monoxide to the mixture to a desired pressure with the proviso that the solvent for the reaction mixture before introduction of oxygen consists of the aromatic hydroxy compound;

(xii) starting gas flow to the mixture at a desired concentration of oxygen and carbon monoxide;

(xiii) heating the mixture to a temperature in a range between that sufficient to keep the mixture molten and a desired ultimate temperature; and

(xiv) contacting the mixture with one or more mixtures comprising phenol and one or more catalyst components comprising the following and any reaction products thereof:

(A) at least one palladium source;

(B) at least one tetrafluoroborate, hexafluorophosphate, tetraarylborate, arylsulfonate, sulfate, nitrate, carboxylate, acetate, benzoate, halide, chloride, or bromide salt with cation selected from the group consisting of guanidinium, ammonium, phosphonium, sulfonium, and alkali metal;

(C) at least one metal co-catalyst with metal selected from the group consisting of lead, cobalt, copper, titanium, manganese, cerium, and mixtures thereof; and

(D) optionally, at least one activating solvent.